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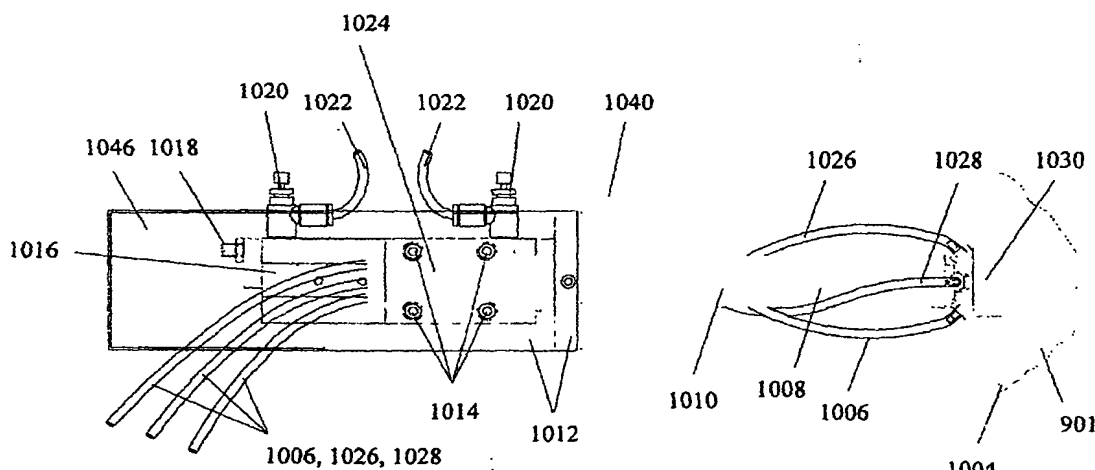
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(54) Title: ELECTROPOLISHING AND/OR ELECTROPLATING APPARATUS AND METHODS



(57) **Abstract** In one aspect of the present invention, exemplary apparatus and methods are provided for electropolishing and/or electroplating processes for semiconductor wafers. One exemplary apparatus includes a cleaning module having an edge clean assembly (930) to remove metal residue on the bevel or edge portion of a wafer (901). The edge cleaning apparatus includes a nozzle head (1030) configured to supply a liquid and a gas to a major surface of the wafer, and supplies the gas radially inward of the location the liquid is supplied to reduce the potential of the liquid from flowing radially inward to the metal film formed on the wafer.

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